INTRODUCTION

Over the past few years, urological laparoscopy has developed from simple diagnostic procedures for cryptorchidism to its use for varicocele ligation, pelvic lymphadenectomy, nephrectomy, nephro-ureterectomy, radical prostatectomy, colposuspension, dismembered pyeloplasty, adrenalectomy and cystoprostatectomy with the formation of an ileal conduit ***(McNeill and Tolley, 2002).***

Laparoscopic surgery offers patients with various diseases, a number of advantages over the traditional, open procedures. The most important difference is that it does not require the long skin and muscle incisions and sometimes even rib resection of open surgery. These incisions result in long-term dysfunction of the muscles and sometimes muscle atrophy as well as considerable pain in the early postoperative period. The advantages of laparoscopic surgery for the patient are less postoperative pain, earlier recovery and an earlier return to normal activity ***(Gill, 2000).***

Hand-assisted laparoscopy offers an alternative to conversion to open access for difficult laparoscopic cases . The value of the hand-assisted technique is evident when retrieval of intact organ is necessary, such as live donnor nephrectomy and difficult dissection radical nephrectomy. In this technique the surgeon’s non dominant hand is introduced into operating field and the dominant hand utilizes laparoscopic instruments to perform laparoscopic surgeries. The presence of the non dominant hand in the operating field allows

for tactile sensation, tissue palpation, more efficient dissection and retraction. When bleeding occurs, the hand provides prompt secure hemostasis ***(Sossa et al., 2001).***

The first upper urinary tract application of laparoscopy was by Clayman and associates, who performed laparoscopic nephrectomy in 1990 for benign diseases. Since this report, several centers have verified the advantages of this technique in treating selected patients with both benign and malignant conditions affecting the upper urinary tract ***(Clayman et al., 1991; Eraky et al., 2000).***

Traditionally, symptomatic simple renal cysts were managed with open exploration and cyst decortication. Procedures associated with significant morbidity. The introduction of percutaneous and endoscopic techniques enabled diagnostic and therapeutic modalities for cyst evaluation and management. However, for cysts that fail percutaneous or endoscopic maneuvers, laparoscopy offers a safe and effective alternative for management of symptomatic patients ***(Pearle et al., 2000).***

Finally, the need for open ureterolithotomy has markedly decreased owing to the recent advances in endourologic techniques and shock wave lithotripsy. In rare instances, however, shock-wave lithotripsy and endoscopic approaches are unsuccessful, and an open ureterolithotomy necessary. In selected patients, the laparoscopic removal of a calculus from the ureter may reduce the morbidity of an open procedure ***(Feyaerts et al., 2001).***